

## A CASE OF PARAMYOCLONUS MULTIPLEX.

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Minnie R., æt. 30, single, sewing-machine girl, living at 2009 S. 12th St., St. Louis, applied to the Clinic of the St. Louis Medical College, January 9th, 1888, stating that she was troubled with a shaking and jerking of the extremities, especially of the lower.

As she sat in a chair the heels of her shoes kept up a great clatter on the floor. I grasped one of the knees, thinking to hold the foot to the floor and thus stop the shaking or tremor. I was surprised to find that all the force I could command was not sufficient to do so. I felt of the lower extremities under the clothing and found the muscles of the thighs in a condition of marked clonic spasm. With intervals of a few minutes, this peculiar spasm repeated itself a number of times during the short period she was before the class. I saw her again the same day, when she had a more severe attack. She made a determined effort, at my request, to restrain the movements. Not only was she unable to do so, but the effort caused her a very appreciable general fatigue. At this second interview there was an involvement of the muscles of the right shoulder and arm, consisting of occasional rapid abduction and adduction of the arm that disappeared after several jerks of some of the shoulder group of muscles.

Late in the afternoon of the following day, at her home, I witnessed her have an attack, of which the following is a description: The first intimation of it were several deep, sighing inspirations, immediately followed by a violent

spasm of the flexors and extensors of the thighs, causing them to be thrown rapidly up and down, so that, as she sat in a chair, the feet tramped the floor with much force. Her mother and sister at once assisted her to a large reclining-chair, and placing a pillow on another chair, lifted her feet onto it, remarking as they did so that she hurt her heels in the hard attacks unless they were thus protected. She was immediately seized with another violent paroxysm. Her lower extremities were thrown up and down as she lay in a semi-reclining position so that the heels struck the pillow with much force and, except for the protection that it afforded, would certainly have been much bruised. Her body was jostled about in the chair by violent contractions of the gluteal and other muscles of the pelvis and thighs, and those of the back. With all the strength I could put forth, I was unable to hold either one or both of the extremities down on the chairs. During the attack I rapidly loosened and removed most of the clothing from the upper part of the body, and passing my hand over the muscles of the abdomen, back and shoulders, I felt them at different times in a condition of clonic spasm. There were, every few moments, violent movements of the respiratory muscles, causing the respiration to appear distressed; but she at no time complained of difficulty in getting her breath. Occasionally the spasm of the arms, especially of the right, was quite as rhythmic and almost as violent as that of the thighs. The seizure lasted, in varying severity, for about ten minutes, passing away gradually with occasional jerks of some of the muscles of the thighs and arms. When it was gone she was much exhausted, saying that if we would let her alone she could drop off to sleep.

During the whole attack, I saw no spasm of either leg or foot, forearm or hand. I watched this point very carefully, having refreshed my mind on the characteristics of paramyoclonus multiplex by reading again, before I witnessed this attack, the article of Dr. M. Allen Starr, in the *Journal of Nervous and Mental Disease*, July, 1887. There was no distinct spasm of the muscles of the neck or face; but toward the end of the attack there was a tremor of the jaw

which I attributed to her exhausted condition. She had had during the day five or six such attacks as the one just described.

Dr. Henry W. Hermann, Professor of Diseases of the Nervous System in the St. Louis Post-Graduate School of Medicine, saw the case several times, and presented it to his class. I have asked him to furnish a description of one of the attacks, that I might present it along with my own. This he has kindly done as follows, it being a description of an attack of moderate severity: "While sitting in a chair the patient executed a tramping movement with her feet of considerable rapidity, bringing them down alternately, and toward the close of the attack, simultaneously. With a few slower kicks, then with a few jerks in the right arm and a few deep inspiratory sighs the attack ended, lasting a few minutes, to begin again in a little while. She evidently had no control over the movements, and felt very much exhausted after them. There were no symptoms of hysteria. The muscles implicated were those of the hips and thighs, those of the right shoulder and arm also participating slightly. Only once did I see a slight flexion in the hand. The left arm was quiet, and only rarely participated, I was told. There was no disturbance of sensibility. No paralysis except slight weakness on account of the exhaustion. The patellar tendon reflex was exaggerated. Co-ordination good, and the mind clear."

*The patient's statement*, recorded January 12th, 1888, is as follows: Her health has always been excellent. She never has suffered from headache or any other form of nervous trouble. Her menstruation has always been normal and regular. The family history, gained from the patient and her mother, is unimportant. She has been continuously engaged in running a sewing-machine for the past twelve years, most of the time on heavy work, much of the time averaging ten and often twelve hours a day. Several years ago she formed a habit, which she has continued, of placing the left foot in front of the right on the treadle. On account of this position the left extremity did most of the work. (Until recently the attacks almost invariably began in

the muscles of the left thigh). About October 1st, 1887, she had the first attack. While at work her lower extremities were suddenly seized with a jerking. Then followed an attack of the usual description, that lasted several hours, leaving her much fatigued. She arose on the following morning feeling very tired, but went to her place of employment and worked all day. She had no more attacks for two weeks, when she again had a hard one. From this time she had them occasionally, the intervals of time between them constantly lessening. She continued at work, losing an occasional day or two. About the 20th of December she had the most violent attack she has ever had. Since then she has not been able to work, except on portions of one or two days. The attacks have continued to come every day, and on many days frequently. Excepting a general lassitude she feels perfectly well and comfortable when free from attacks. On Christmas day a severe attack seized her when standing, and she almost fell before she could grasp a support. This is the only occasion on which she has come so near falling. She always feels a slightly distressing, drawing sensation at the pit of the stomach, and a general weak, slightly faint condition that prompts her to immediately sit down before the jerking begins. She says the attacks come harder if she is excited, annoyed, or hurried. After them she feels much exhausted, and at times in this condition, cannot resist a crying spell. In some instances there is an almost irresistible desire to sleep following a hard attack.

*Present condition*, April 6th, 1888. The severity and number of attacks have very gradually but almost uninterruptedly diminished. During the past week she has had three seizures of considerable severity, the only ones of the kind for five weeks. Prior to this she had gone three and four days without any attacks at all. Her general health is not as robust as before the attacks began; but she has lost only slightly in weight, eats and sleeps well, and when free from attacks feels perfectly well.

She has taken hyoscyamine, chloral, bromides, morphine and antipyrin, separately and in various combinations.

Chloral seemed more effective than any other remedy used. Hyoscyamine evidently had some effect in arresting the attack when first employed. Antipyrin seemed to have an equal effect, that continued longer. The bromides seemed useless or nearly so. Morphine was used but little, and in combination with some of the other remedies. She has also received several courses of arsenic, each time continued until decided evidences of its constitutional effects were present.

The patient is of medium height, well nourished, with an unusually good muscular development, especially of the lower extremities. There is no evidence of organic disease of any description. There is an increase of galvanic and faradic excitability of the muscles of the extremities, especially of the lower; no qualitative changes. There is an exaggerated knee-jerk, and occasionally a decided ankle-clonus. There are no disturbances of sensation, or co-ordination. There are no evidences of hysteria.

The patient has been under my observation since January 9th, 1888. I have seen her have many attacks varying in severity from the one described above to a slight tremor of the lower extremities, with an occasional jerk of them and of the shoulders. Twice only I have seen slight spasm of some of the muscles of the right fore-arm. Dr. Hermann also observed this in one of the attacks that he saw. According to her own statement it has occurred very seldom. Until the present week I had never seen any spasm of the leg, when I found, in one attack, the muscles of the left calf in active clonic spasm. She called my attention to the fact and stated that it had happened for the first time two days before; and she was much distressed over the fact of the "jerking" coming in a new place. I have never seen any involvement of the neck or face. The attack always began with a rapid, rhythmic movement of the thighs. I have always been able to induce an attack by a sharp blow on the thighs, or on the patellar tendon, or often by several quick dorsal flexions of the foot. Twice she has had hard attacks immediately on getting into a cold bed.

*Note, May 12th.*—More than three weeks ago I began in

this case a methodic course of galvanism, which prior to then had been impracticable. This has been continued to the present time. It has consisted of a séance of five to fifteen minutes every other day, with the anode (a 9x10 cm., sponge-covered electrode) on the neck and the mobile-cathode (4x4 cm.) down the back and all the extremities, with a current of 10 to 15 ma. She has taken no medicine at all since the above treatment was begun. She has improved very rapidly during the last two weeks, occasional fibrillary contractions being, now, the only evidence of the presence of the trouble.